

What is claimed is:

1. A defect detection system for use in an image processing system wherein the suitability of a film for processing is determined prior to scanning comprising:

a sensor for detecting one or more imperfections on the film; and

5 a microprocessor connected to the sensor that determines the amount and extent of imperfections on the film based on one or more reference sensor readings.

2. The defect detection system as recited in claim 1, wherein the image processing system comprises a DFP system.

3. The defect detection system as recited in claim 1, further comprising an output device to report the amount and extent of imperfections on the film.

4. The defect detection system as recited in claim 1, further comprising a reference sensor and a memory, wherein the reference sensor readings are determined by the reference sensor and stored in the memory.

5. The defect detection system as recited in claim 1, wherein the sensor is a reflective sensor.

6. The defect detection system as recited in claim 1, wherein the sensor detects light transmitted through the film.

7. The defect detection system as recited in claim 1, further comprising a tape dispenser positioned to repair the film if the imperfection detected by the sensor is a breakage in the film.

8. The defect detection system as recited in claim 1, wherein the sensor detects the abnormalities in the shape of the perforations on the film.

9. The defect detection system as recited in claim 1, wherein the sensor detects moisture on the film.

10. The defect detection system as recited in claim 1, wherein the sensor detects oil on the film.

11. The defect detection system as recited in claim 1, wherein the sensor detects the moisture level of the film and if the moisture level is above a predetermined acceptable moisture level the film is dried until the moisture level drops below the predetermined acceptable moisture level.

12. The defect detection system as recited in claim 1, wherein the sensor detects foreign objects on the film.

13. The defect detection system as recited in claim 1, wherein the sensor detects foreign objects on the film and if the amount of foreign objects on the film is above a

predetermined acceptable foreign object level the film is cleaned until the foreign object level drops below the predetermined acceptable foreign object level.

14. A defect detection system for use in image processing comprising:

a roller for feeding a film into a sensor;

a reflective sensor for detecting imperfections on a film;

a microprocessor connected to the sensor that determines the amount and extent

5 of imperfections on the film and compares them to reference sensor readings; and

a router for separating film that is suitable for film processing from film that is not suitable for film processing based on the comparison of actual sensor readings to reference sensor readings by the microprocessor.

15. The defect detection system as recited in claim 14, further comprising an output device to report the amount and extent of imperfections on the film.

16. The defect detection system as recited in claim 14, further comprising a reference sensor and a memory, wherein the reference sensor readings are determined by the reference sensor and stored in the memory.

17. The defect detection system as recited in claim 14, further comprising a tape dispenser positioned to repair the film if the imperfection detected by the sensor is a breakage in the film.

18. The defect detection system as recited in claim 14, wherein the sensor detects the moisture level of the film.

19. The defect detection system as recited in claim 14, wherein the sensor detects the moisture level of the film and if the moisture level is above a predetermined acceptable moisture level the film is dried until the moisture level drops below the predetermined acceptable moisture level.

20. The defect detection system as recited in claim 14, wherein the sensor detects foreign objects on the film.

21. The defect detection system as recited in claim 14, wherein the sensor detects foreign objects on the film and if the amount of foreign objects on the film is above a predetermined acceptable foreign object level the film is cleaned until the foreign object level drops below the predetermined acceptable foreign object level.

22. A method of identifying film suitable for digital image processing comprising the steps of:

exposing a film to one or more light sources;

detecting the light reflected from the film to measure imperfections on the film;

5 determining if the imperfections on the film exceed levels deemed detrimental to digital film processing; and

routing the film based on the sensor output depending on whether the film is suitable for digital film processing from film that is not suitable for digital film processing.

23. The method as recited in claim 22, further comprising the step of correcting the imperfection on the film by selecting a remedial measure that corrects the imperfection.

24. The method as recited in claim 23, wherein the remedial measure comprises the step of removing excessive moisture from the film.

25. The method as recited in claim 23, wherein the remedial measure comprises the step of removing foreign objects from the film.

26. The method as recited in claim 23, wherein the remedial measure comprises the step of repairing one or more broken sprocket holes are repaired prior to digital film processing.

27. The method as recited in claim 23, wherein the steps of exposing the film to one or more light sources, detecting the light reflected from the film to measure imperfections on the film, determining if the imperfections on the film exceed reference sensor readings, and correcting the imperfection on the film are repeated in an iterative manner.

28. The method as recited in claim 22, further comprising the steps of:  
determining the level of moisture in the film;  
detecting foreign objects on the film; and  
scanning for one or more broken sprocket holes on the film edges, wherein an  
5 imperfection in the moisture level, the presence of foreign objects and broken sprocket  
holes will lead to rejection of the film from further digital film processing.
29. The method as recited in claim 22, further comprising the step of rolling the film  
into a canister when the film is not suitable for digital film processing.
30. The method as recited in claim 22, further comprising the step of reporting one  
or more reasons why the film is not suitable for digital film processing.
31. The method as recited in claim 30, wherein the one or more reasons identify an  
imperfection type and a location on the film where the imperfection was detected.
32. The method as recited in claim 22, further comprising the step of cleaning the  
film before the step of exposing the film to one or more light sources.

33. An imaging system comprising:

a defect detector comprising a defect sensor for detecting one or more imperfections on a photographic media, and a microprocessor connected to the defect sensor that determines the amount and extent of imperfections on the photographic media based on one or more reference sensor readings;

at least one light source operable to illuminate the photographic media; and

at least one image sensor operable to detect light from the photographic media.

34. An apparatus for cleaning film in a film processing system, comprising:

a particle removal member configured to remove particles from film;

a cleaning system automatically movable between a contacting position and a non-contacting position, wherein, in the contacting position, the cleaning system is configured to contact the particle removal member and remove particles therefrom, wherein the cleaning system is configured to automatically move from the non-contacting position to the contacting position at a predetermined time.

35. The apparatus as recited in claim 34, wherein the particle removal member comprises a particle removal roller adapted to rotate as film is moved past the roller.

36. The apparatus as recited in claim 34, wherein the particle removal member comprises an adhesive surface adapted for removing particles from the film as the film is moved past the member.

1. The first step is to identify the key components of the system. This involves understanding the hardware, software, and data involved. For example, in a web application, this might include the server, the database, and the user interface.
2. The second step is to analyze the system's behavior. This involves observing how the system responds to different inputs and outputs. This can be done through manual testing or automated testing tools.
3. The third step is to identify the system's vulnerabilities. This involves looking for weaknesses in the system that could be exploited by an attacker. This can be done through a variety of techniques, including code review, penetration testing, and vulnerability scanning.
4. The fourth step is to develop a plan to address the identified vulnerabilities. This involves determining which vulnerabilities are most critical and developing a strategy to mitigate them. This might involve patching software, changing configuration settings, or implementing new security controls.
5. The fifth step is to implement the plan. This involves putting the security measures into place and testing them to ensure they are effective. This might involve deploying patches, changing configuration settings, or implementing new security controls.
6. The sixth step is to monitor the system's security. This involves continuously monitoring the system for signs of compromise or attack. This can be done through a variety of techniques, including log analysis, intrusion detection, and security information and event management (SIEM).
7. The seventh step is to respond to any security incidents. This involves taking action to contain and remediate any security incidents that occur. This might involve isolating affected systems, investigating the cause of the incident, and implementing measures to prevent future incidents.
8. The eighth step is to review the system's security. This involves periodically reviewing the system's security to ensure it remains up-to-date and effective. This might involve conducting a security audit or a penetration test.
9. The ninth step is to document the system's security. This involves creating a record of the system's security measures and any incidents that occur. This can be useful for future reference and for improving the system's security.
10. The tenth step is to communicate the system's security. This involves sharing information about the system's security with relevant stakeholders. This might involve creating a security policy or a security report.



38. The apparatus as recited in claim 34, wherein the cleaning system comprises:  
a cleaning member movable between the contacting position and the non-  
contacting position; and  
a controller configured to cause the cleaning member to move between the  
5 contacting position and the non-contacting position at the predetermined time.

39. The apparatus as recited in claim 34, wherein the particle removal member  
comprises a roller and the predetermined time comprises a predetermined number of  
rotations of the roller.

40. An apparatus for cleaning film in a film processing system, comprising:  
a film transport system for moving film through a predetermined path:  
a particle removal member configured to contact film and remove particles from  
the film as the film is moved through the predetermined path; and  
5 a cleaning system configured to remove particles from the particle removal  
member, the cleaning system and the particle removal member being relatively movable  
so as to be selectively contactable with respect to each other, the cleaning system having  
a particle attraction surface operative to remove particles from the particle removal  
member when the cleaning system is in contact with the particle removal member.

41. The apparatus as recited in claim 40, wherein the cleaning system comprises:  
a disposable adhesive tape having the particle attraction surface; and  
a cleaning member in contact with the tape.

42. The apparatus as recited in claim 41, further comprising:  
a tape transport system configured to move the tape over the cleaning member.
43. The apparatus as recited in claim 40, wherein the particle removal member comprises a particle take-off roller, and wherein the cleaning system includes a contact roller relatively movable with respect to the particle take-off roller.
44. The apparatus as recited in claim 43, wherein the cleaning system further comprises:  
a disposable adhesive tape in contact with the contact roller and relatively movable with respect to the contact roller.
45. The apparatus as recited in claim 40, wherein the cleaning system comprises  
a cleaning member; and  
a controller configured to cause the cleaning member to move relative to the particle removal member at a predetermined time.
46. The apparatus as recited in claim 45, wherein the particle removal member comprises a roller and the predetermined time comprises a predetermined number of rotations of the roller.
47. An apparatus for cleaning film in a film processing system, comprising:  
a particle removal member configured to remove particles from film;

a cleaning system comprising:

a disposable adhesive tape;

5 a cleaning member in contact with the tape and movable between a contacting position and a non-contacting position, wherein, in the contacting position, the cleaning member is configured to place the tape in contact with the particle removal member such that the tape removes particles therefrom; and  
a tape transport system for movement of the tape across the cleaning  
10 member.

48. The apparatus as recited in claim 47, wherein the cleaning member comprises a contact roller and the particle removal member comprises a particle take-off roller.

49. The apparatus as recited in claim 47, wherein the cleaning system further comprises:

a controller configured to cause the cleaning member to move between the contacting position and the non-contacting position at predetermined times.